

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43bis.1)

To:

see form PCT/ISA/220

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/B2006/001526

International filing date (day/month/year)
26.01.2006

Priority date (day/month/year)
27.01.2005

International Patent Classification (IPC) or both national classification and IPC
INV. C07F11/00 C07C51/41

Applicant
OCEAN NUTRITION CANADA LTD.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☒ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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Date of completion of
this opinion

See form
PCT/ISA/210

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/IB2006/001526

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - ☒ the international application in the language in which it was filed
 - ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ on paper
 - ☐ in electronic form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in electronic form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of

- ☐ the entire international application
- ☒ claims Nos. 62-71 and 73-79 (wrt industrial applicability)

because:

- ☒ the said international application, or the said claims Nos. 62-71 and 73-79 relate to the following subject matter which does not require an international search (*specify*):

see separate sheet

- ☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):
- ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed (*specify*):
- ☐ no international search report has been established for the whole application or for said claims Nos.
- ☐ a meaningful opinion could not be formed without the sequence listing; the applicant did not, within the prescribed time limit:
 - ☐ furnish a sequence listing on paper complying with the standard provided for in Annex C of the Administrative Instructions, and such listing was not available to the International Searching Authority in a form and manner acceptable to it.
 - ☐ furnish a sequence listing in electronic form complying with the standard provided for in Annex C of the Administrative Instructions, and such listing was not available to the International Searching Authority in a form and manner acceptable to it.
 - ☐ pay the required late furnishing fee for the furnishing of a sequence listing in response to an invitation under Rules 13ter.1(a) or (b).
- ☐ a meaningful opinion could not be formed without the tables related to the sequence listings; the applicant did not, within the prescribed time limit, furnish such tables in electronic form complying with the technical requirements provided for in Annex C-bis of the Administrative Instructions, and such tables were not available to the International Searching Authority in a form and manner acceptable to it.
- ☐ the tables related to the nucleotide and/or amino acid sequence listing, if in electronic form only, do not comply with the technical requirements provided for in Annex C-bis of the Administrative Instructions.
- ☐ See Supplemental Box for further details

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Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	2,5-7,9,11,14-19,21,22,29-31,36,39-41,43,47-79
	No: Claims	1,3,4,8,10,12,13,20,23-28,32-35,37,38,42,44-46
Inventive step (IS)	Yes: Claims	2,5-7,9,11,14-19,21,22,29-31,36,39-41,43,47-79
	No: Claims	1,3,4,8,10,12,13,20,23-28,32-35,37,38,42,44-46
Industrial applicability (IA)	Yes: Claims	1-61,72
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item III

Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

Claims 62-71 and 73-79 relate to subject-matter considered by this Authority to be covered by the provisions of Rule 67.1(iv) PCT. Consequently, no opinion will be formulated with respect to the industrial applicability of the subject-matter of these claims (Article 34(4)(a)(I) PCT).

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

V.1 Subject matter

The present application relates to chromium compounds bearing unsaturated fatty acid ligands and their use in the treatment of diseases.

V.2 Documents

Reference is made to the following documents; the numbering will be adhered to in the rest of the procedure:

D1: DD 230 137 A3
D2: GB-A-1 274 718
D3: US-A-4 022 725
D4: US-A-3 547 666
D5: US-A-3 256 266
D6: US-A-3 932 285
D7: US 2002/169204 A1

V.3 Novelty

V.3.1.1 Documents D1-D6 (p. 9 l. 6, claim 8, D1; example 24, D2; example 7, D3;

example 6(iv), D4; claim 1, example 1, col. 2 l. 55 - col. 3 l. 4, D5; abstract, col. 2 l. 24-68, example 14, D6) disclose compounds and processes for making said compounds which fall within the scope of claims 1, 3, 4, 8, 10, 12, 13, 20, 23-28, 32-35, 37, 38, 42, 44-46 of the present application. Thus, claims 1, 3, 4, 8, 10, 12, 13, 20, 23-28, 32-35, 37, 38, 42, 44-46 of the present application cannot be considered novel with regard to D1-D6 (Article 33(2) PCT). present application.

V.3.1.2 It is noted that the compound in claim 46 is defined as a product by process. Claims for products defined in terms of a process of manufacture are allowable only if the products as such fulfil the requirements for patentability, i.e. inter alia that they are new and inventive. A product is not rendered novel merely by the fact that it is produced by means of a new process. A claim defining a product in terms of a process is to be construed as a claim to the product as such.

V.3.2 Document D7 discloses $[\text{Cr}_3\text{O}(\text{O}_2\text{CCH}_2\text{CH}_3)_6(\text{H}_2\text{O})_3]^+$ and its use as a nutritional supplement for the treatment of medical disorders (abstract; D7). D7 does not disclose the use of (unsaturated) fatty acids for use in such complexes. Thus, claims 1-79 of the present application can be considered novel with regard to D7 (Article 33(2) PCT).

V.4 Inventive step

D7 is considered to be the closest prior art with respect to novel claims 2, 5-7, 9, 11, 14-19, 21, 22, 29-31, 36, 39-41, 43 and 47-79. D7 discloses $[\text{Cr}_3\text{O}(\text{O}_2\text{CCH}_2\text{CH}_3)_6(\text{H}_2\text{O})_3]^+$ and its use as a nutritional supplement for the treatment of medical disorders (abstract; D7).

The difference to the present application lies in the use of unsaturated fatty acids (present application) vs propanoic acid (D7) in chromium complexes.

The problem to be solved is considered to be the provision of alternative chromium complexes for the use as nutritional supplements.

The solution are the compounds and uses according to claims 2, 5-7, 9, 11, 14-19, 21, 22, 29-31, 36, 39-41, 43 and 47-79.

Starting from D7 the solution of the present application would not be obvious to the skilled person. The compounds and their uses cannot be derived from D7. Thus, claims 2, 5-7, 9, 11, 14-19, 21, 22, 29-31, 36, 39-41, 43 and 47-79 of the present application can be considered inventive with regard to D7 (Article 33(3) PCT).

V.5 Industrial applicability

For the assessment of the present claims 62-71 and 73-79 on the question whether they are industrially applicable, no unified criteria exist in the PCT Contracting States. The patentability can also be dependent upon the formulation of the claims. The EPO, for example, does not recognize as industrially applicable the subject-matter of claims to the use of a compound in medical treatment, but may allow, however, claims to a known compound for first use in medical treatment and the use of such a compound for the manufacture of a medicament for a new medical treatment.